



Digital Ophthalmoscope

F-10



The Art of Eye Care

Experience Spectacular Retinal Imaging with the new NIDEK F-10 Digital Ophthalmoscope

The F-10 was developed to give Ophthalmologists a high definition (HD) diagnostic imaging system. Designed to provide astonishing infrared scanning images, high contrast FA Images with streaming video plus super IA choroidal views. Auto fluorescence is also available for early dry AMD patients/ studies.

The F-10 is the Next Generation of Scanning Laser Ophthalmoscope. It is equipped with the latest in Laser Digital Technology, providing unsurpassed image quality for every detail of the retina and choroid. It is very useful in identifying minute details of any retinal and choroidal pathology.

Optimized Catadioptric System of the F-10 captures crystal clear images of the retina even on periphery areas with minimized affects of aberration. The F-10 Digital Ophthalmoscope provides exceptional capillary details without any post-exam image processing.

The F-10's four light sources for each unique wavelength are applicable for various clinical applications.

The F-10 is capable of both IA and FA streaming video and digital images, or simultaneous imaging of both. The F-10's high-speed capture rate enables clinicians to locate the exact location of retinal irregularities.

As well as angiography, the F-10's IR scanning offers the possibility of its utilization as a daily routine examination device.

The F-10 Digital Ophthalmoscope also provides new techniques such as DCO - Differential Contrast Ophthalmoscopy and Dark Field Imaging.



Image is Everything.

Fabulous

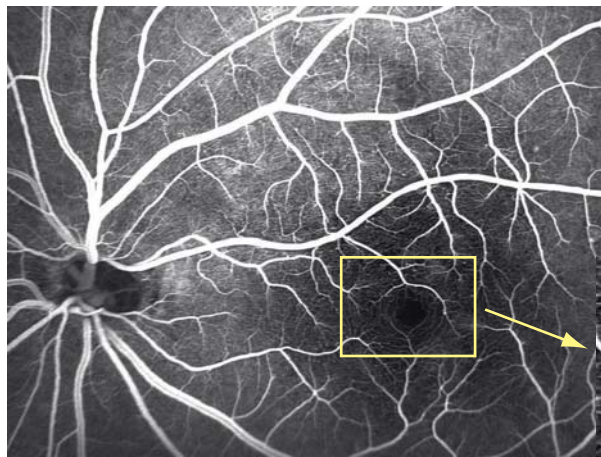
Outstanding Images

Futuristic Technology

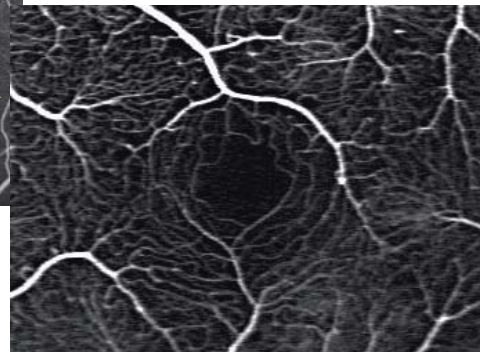
Ahead of its Time

Fundamental

Foundation of Basic Disease Detection

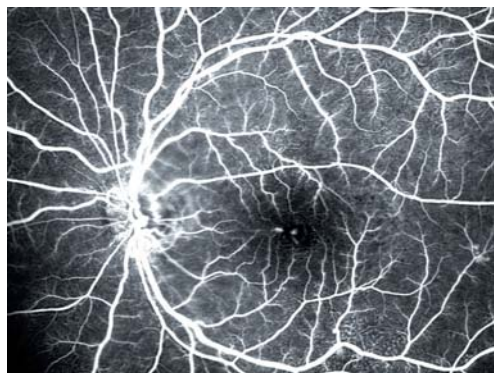


High-quality image provides retinal details even in the capillary scale.

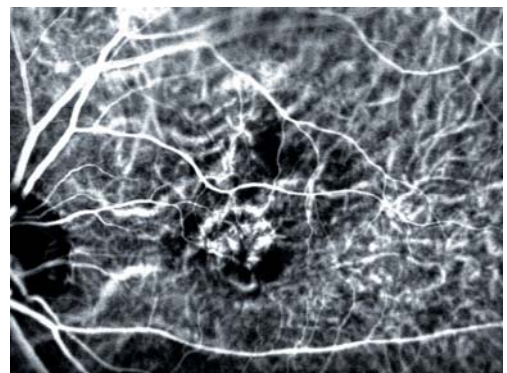


Each Fluorescein Angiography (FA), ICG Angiography (IA) and simultaneous imaging of both with high frame rate enables clear observation of pathology from the early stage of examination.

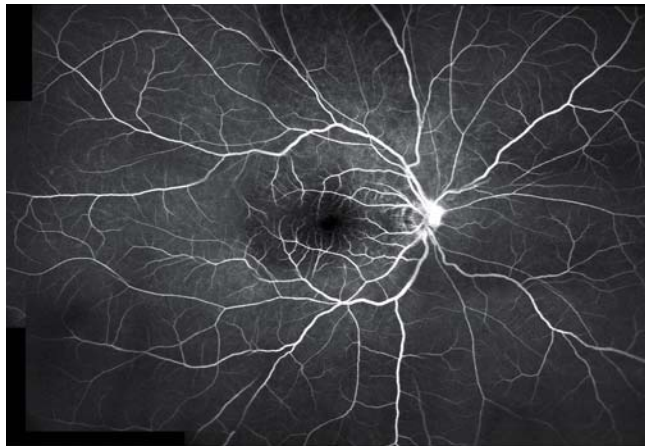
FA



IA



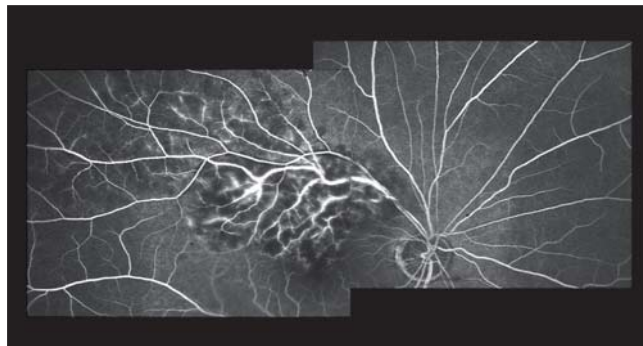
Fabulous - Outstanding Images



Retinopathy - Panoramic imaging with preset fixation points

Panoramic Imaging of the F-10 is useful in capturing details of retinopathy in central and peripheral areas of the patient's retina.

FA

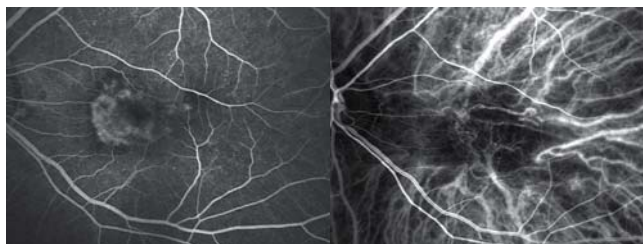


BRVO (Branch Retinal Vein Occlusion) - FA with 60 degrees wide-angle adaptor

60 degrees wide-angle adaptor enables practitioners to capture details of pathology in peripheral area of retina, as well as macular area.

FA

IA



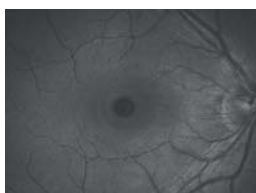
AMD (Age Related Macular Degeneration) - Using simultaneous FA and IA

Choroidal Neovascularization is clearly observed from an early stage of fluorescence imaging.



4 different light sources

Blue (490 nm)



Green (532 nm)



Red (660 nm)



IR (790 nm)



Each color of laser captures the image different depth of retina.

*Green laser image is less chromatic aberration than red-free image of fundus camera.

Green (532 nm)



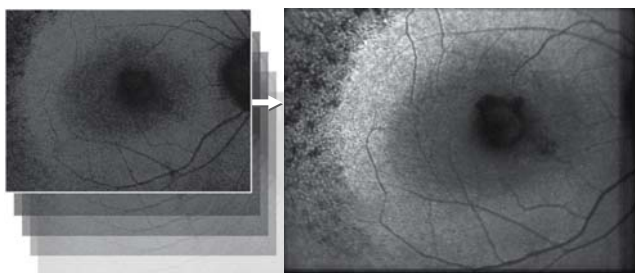
The F-10's unique 532 nm Laser Imaging provides clear observation of blood leakage, that can be very helpful as pre-operational examination before PDT or TTT.

Green (532 nm)



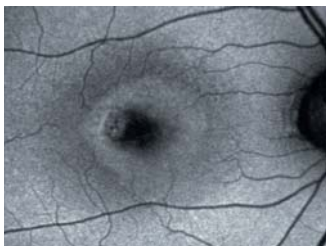
532 nm laser imaging is useful in monitoring patient with Glaucoma by looking at the RNFL.

AUTOFLUORESCENCE - Autofluorescence Imaging

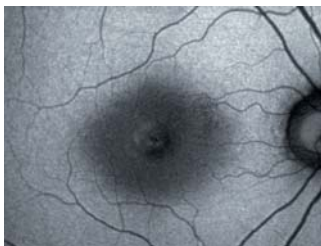


490 nm wavelength light source of the F-10 enables Autofluorescence Imaging. Since Autofluorescence imaging requires no injections to the patient, it is comfortable for the patient, yet offers high quality images for early AMD diagnosis.

PCV case

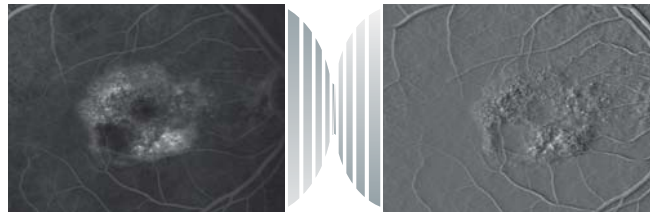


CSC case



Futuristic Technology - Ahead of its Time

DCO (Differential Contrast Ophthalmoscopy) on FA Image



Overlay of vessel over pathology is clearly observed.

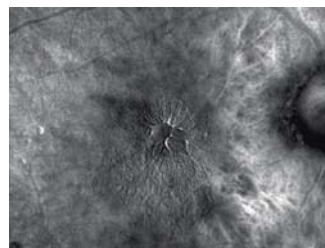
Retro Mode

Retro Mode is a new non-invasive technique which can detect the pathology high-sensitively and quickly.

IR



Retro Mode



Retro mode shows distribution of cystoid macular edema clearly.

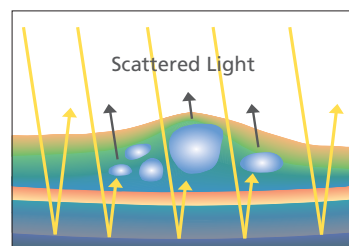
IR



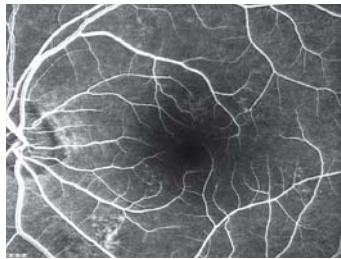
Retro Mode



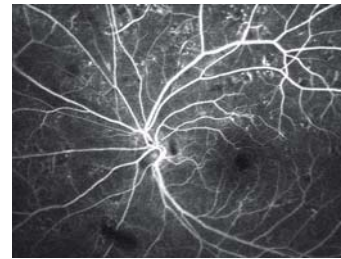
Retro mode detects spread of drusen high-sensitively.



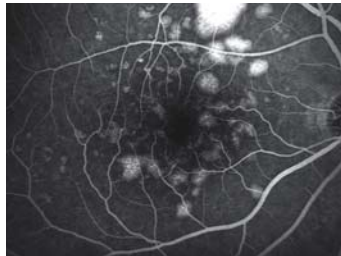
Scattered light of IR visualizes abnormal reflection caused by drusen, edema etc.



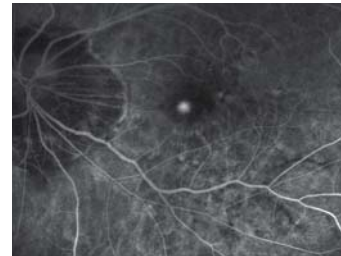
*Early stage RPE
Degeneration-
FA*



*Pre-Proliferation
Diabetic
Retinopathy-FA
FA with 60°
wide-angle
adaptor*



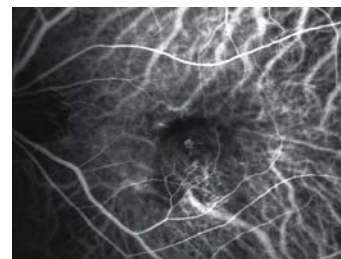
*Retinal Pigment
Epithelium
Detachment
(PED) - FA*



*CNV observation
on patient with
a High Myopia
(-15D) - FA*



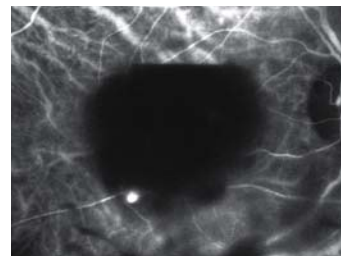
*Polypoidal
Choroidal
Vasculopathy
(PCV) - IA*



*Polypoidal
Choroidal
Vasculopathy
(PCV) - IA*



*Central Retinal
Vein
Occlusion
(CRVO) - FA*

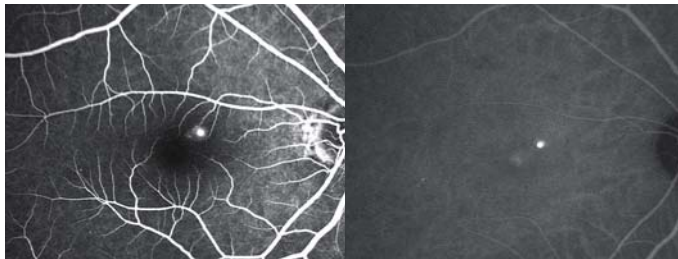


*Submacular
Hematoma in
BRVO - IA*

Fundamental - Foundation of Basic Disease Detection

FA

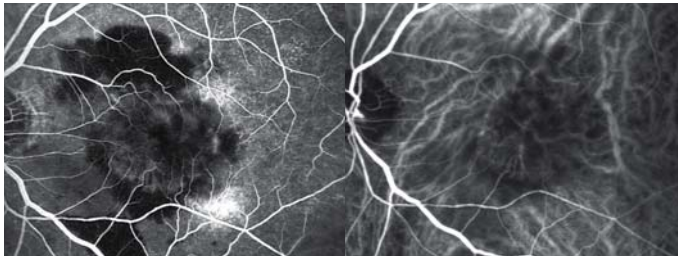
IA



*Central Serous
Chorioretinopathy (CSC)*
Simultaneous FA and IA

FA

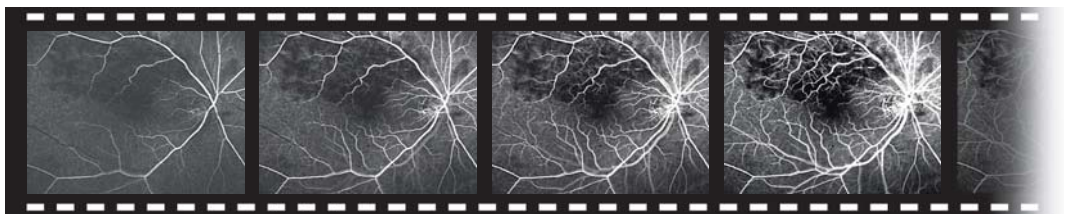
IA



*Retinal Angiomatous
Proliferation FA and IA*

High Frame Rate

F-10 captures in-flow fluorescent image with high frame rate (Max. 26 Hz). This is important at early stage of fluorescence imaging both in FA and IA, since in-flow imaging enables to accurately localize where the pathology exists, such as CNV, Leakage, Vein Occlusion, etc.



Feasible - Experience the Freedom



The NAVIS-Lite is the sophisticated and user-friendly data filing software, -NAVIS-Lite- allowing easy management of movie files and still images, as well as patient data management.

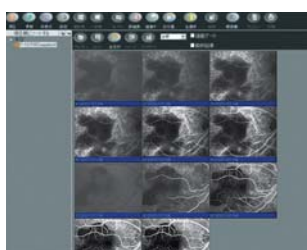


Capturing Mode

Operation enables easy capturing of movie or still image.



Panoramic Imaging is built in feature of NAVIS Lite.

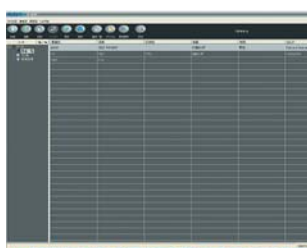


Thumbnail, Still Image Review Mode

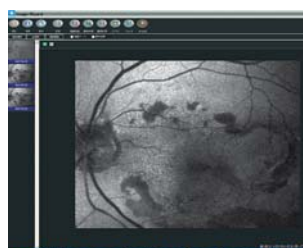


C/D ratio

Cup/Disk Ratio and other measuring functions are standard features of NAVIS Lite.



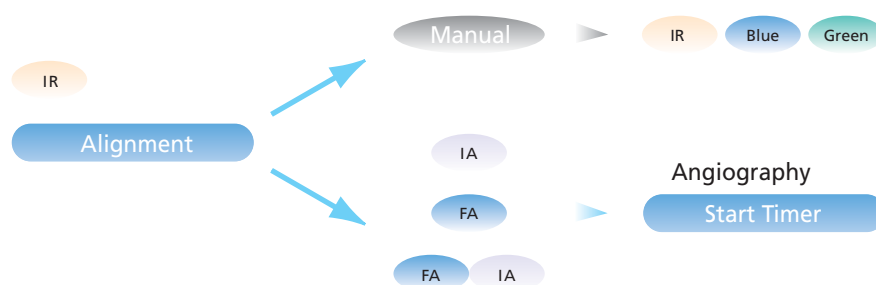
NAVIS Lite is equipped with sophisticated patient database.



Autofluorescence Imaging Function is standard feature of NAVIS Lite.

Improved User Friendliness

IR imaging is recommended as focal alignment at the first stage of the examination. Depending on various scene of clinical application, the operator can switch to manual selection of scanning laser wavelength, or enter FA, IA or simultaneous FA/IA mode. All switches required for operation is located at the front side of the device, thus intuit operation is enabled.

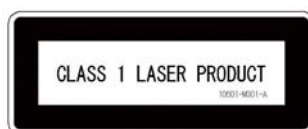


F-10 Specifications

Field of view	40 (24 x 32) 60 (36 x 48) with non contact wide field lens			
Focus range	-15 to +15 dioptres spherical, increments of 0.5 dpt			
Progressive scanning system				
Digital image size (pixels) [Single display mode]	1600 x 1200	1280 x 960	800 x 600	640 x 480
Display image size	1024 x 720	1024 x 720	800 x 600	640 x 480
Max. image frequency	10 Hz	12 Hz	20 Hz	26 Hz
Ref. / FAG / ICG / FAG and ICG				
[Dual display mode]				
Display image size	512 x 720 (x 2)	512 x 720 (x 2)	512 x 600 (x 2)	512 x 480 (x 2)
Max. image frequency	3 Hz	3 Hz	5 Hz	6 Hz
FAG and ICG				
Optical resolution	16 to 20 μ m			
Fixation	Red laser internal 2 x 2 LED			
Confocal aperture	1.5 to 7 mm (5 increments) Dark field (3 increments)			
Measurable pupil diameter	2.5 mm or larger			
Laser source	ICG excitation and IR reflectance : laser 790 nm (Class 1) FAG excitation and blue reflectance : laser 490 nm (Class 1) Green reflectance : laser 532 nm (Class 1) Red reflectance : laser 660 nm (Class 1)			
Image mode	Fluorescein angiography (FA) ICG angiography (IA) FA + IA IR reflectance (IR) Blue reflectance Green reflectance Red reflectance Retro mode Ring aperture Differential contrast ophthalmoscopy (DCO)			
Sensor mode	Normal sensor / differential contrast sensor			
Output	NTSC LAN (10 / 100 Base-T)			
Software	- Export function - Automatic image transfer to PC - Guided fixation - List and thumbnail index available			
Power supply	AC 100 to 120 V or AC 220 to 240 V \pm 10% 50 / 60 Hz			
Power consumption	A maximum of 350 VA			
Dimensions / Weight	450 (W) x 610 (D) x 590 to 630 (H) mm / 55 kg 17.7 (W) x 24.0 (D) x 23.2 to 24.8 (H) " / 121.3 lbs.			



Caution : U.S. Federal Law restricts this device to sale, distribution and use by or on the order of a physician or other licensed eye care practitioner.



This device complies with class 1 laser product.

Specifications and design are subject to change without notice.



Eye & Health Care

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